## REMARKS

Initially, Applicants would like to express appreciation to the Examiner for the detailed Official Action provided, for the acknowledgment of Applicants' Claim for Priority and receipt of the certified copies of the priority documents, and for the acknowledgment of Applicants' Information Disclosure Statement by return of the Form PTO-1449. Applicants also note that the Examiner has not indicated that the drawings have been approved by the Official Draftsperson on a Form PTO-948. The Examiner is thus requested to indicate that Applicants' drawings are acceptable in the next Official Action.

Upon entry of the above amendment, claims 1-4 and 6 will have been amended. Accordingly, claims 1-20 are currently pending. Claims 5 and 7-20 have been withdrawn from consideration by the Examiner as directed to a nonelected invention. Applicants respectfully request reconsideration of the outstanding rejections and allowance of claims 1-4 and 6 in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

The Examiner has rejected claims 1-4 and 6 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner has rejected claim 1 as lacking proper antecedent basis for "the first damping force" and "the second damping force". The Examiner has rejected claim 3 as lacking proper antecedent basis for "the outer

circumferential surface" and "the inner circumferential surface". In response thereto, Applicants have amended claim 1 to change "the first damping force" and "the second damping force" to --a first damping force-- and --a second damping force--, respectively. Additionally, the language "the outer circumferential surface" and "the inner circumferential surface" has been deleted from claim 3. In the amendment to claim 1 incorporating some language of claim 3, the language --an outer circumferential surface-- and --an inner circumferential surface-- has been added to claim 1. Accordingly, in view of the above noted amendments and remarks, claims 1-4 and 6 are believed to fully comply with 35 U.S.C. § 112, second paragraph, and Applicants respectfully request reconsideration and withdrawal of the outstanding rejection under 35 U.S.C. § 112, second paragraph.

The Examiner has rejected claims 1-4 under 35 U.S.C. § 102(a) as being anticipated by JP 05-83516 to YASUHITO et al. The Examiner takes the position that the YASUHITO et al. patent shows a tensioner including a base 20, a rocking arm 30, a pulley, a torsion spring, and a friction member 21. The Examiner further states that "[i]t is apparent that a first damping force acting on the arm when the belt is in tension is relatively larger than a second damping force acting on the arm when the belt is slack".

Although Applicants do not necessarily agree with the Examiner's rejection of the claims on this ground, nevertheless, Applicants have amended independent claim 1 to clearly obviate the above noted ground of rejection in order to expedite prosecution of the present

application. In this regard, Applicants note that YASUHITO et al. fails to show each and every element recited in the amended claim. In particular, claim 1 sets forth an autotensioner including, inter alia, a torsion coil spring that is "attached eccentrically to the axial center of said base". The YASUHITO et al. patent discloses an autotensioner including a base 20, a rocking arm 30, a pulley 10, a torsion spring 40, a belt, and a friction member 60. As shown in figure 1 of the YASUHITO et al. patent, the torsion spring 40 is provided in the base, but, contrary to the Examiner's position, the torsion spring 40 does not appear to be attached to the base. Moreover, as can be seen in figure 1 of YASUHITO et al., the torsion spring is not attached "eccentrically" to the center of the base. Accordingly, the YASUHITO et al. patent does not show an autotensioner including a torsion spring that is "attached eccentrically to the axial center of said base" as recited in claim 1.

Additionally, claim 1, as amended, sets forth an autotensioner including, inter alia, a base with a tubular shape, a rocking arm with a tubular part, "a friction member that is interposed between an outer circumferential surface of said tubular part and an inner circumferential surface of said base", and "said torsion coil spring being attached eccentrically to the axial center of said base, and said rocking arm being supported to be able to be displaced relative to said base, whereby a first damping force acting on said rocking arm when said belt is tensioned becomes relatively larger than a second damping force acting

on said rocking arm when said belt is slack". Namely, it is a feature of the present invention that the first damping force is larger than the second damping force.

For a detailed description of the configuration and operation of the vibration damping in Applicants' invention, see page 18, line 25 through page 23, line 15 of the specification. In the present invention, the first damping force is larger than the second damping force. In this regard, in Applicants' invention, when the belt 10 acts on the pulley 22, a load is applied to the bolt 40 and the rocking arm 24 in the load direction Y (figure 4) that is parallel to the line P. As a result, a moment force tending to tilt the axial center L4 from the base axial center L1 about the base bottom 32 acts on the rocking arm 24 (figure 5). Due to the clearance between the rocking shaft 244 and the cylindrical part 46 of the bolt and the hole part 38, and between the bolt head 44 and the bolt receiving part 33, and to the force of the belt 10, the center L4 tilts slightly in the axial load direction Y (figure 5). See particularly page 19, lines 8-21. Additionally, the torsion coil spring 60 biases the tubular part 246 and the bushing 26 in the direction Z (figure 4). Since the direction Z is substantially the same as the direction Y, the total force which the rocking arm 24 applies to the bushing 26 equals the sum of the force applied by the torsion coil spring 60 in the direction Z plus the force applied by the belt 10 in the direction Y. See particularly page 20, lines 1-15. Accordingly, due to the configuration of Applicants' autotensioner, when the belt tension is increased, the force of the belt 10 in the load direction Y is increased, the rocking arm 24 rotates in the

clockwise direction and torsion coil spring 60 is wound tighter, so that the reaction force of the torque increases. Thus, the biasing force of the torsion coil spring 60 in the direction Z also increases. Therefore, the total first damping force (*i.e.*, the sum of the two forces) of the rocking arm 24 applied at the position 26w (figure 4) is larger. See particularly page 20, line 16 through page 21, line 2. Conversely, when the tension in the belt 10 is decreased, the rocking arm 24 rotates in the counterclockwise direction and the torsion coil spring 60 is untwisted so the torque is reduced. Thus, the rocking arm 24 moves so that the center L4 coincides with the axial center L1, and the force applied by the rocking arm 24 on the bushing 26 in the direction Z is extremely small. Also, since the degree of tilt thus becomes small, the inner circumferential surface 34a and the arm outer circumferential surface 246a are parallel, so that the resulting force at the position 26w also becomes small. Therefore, the wedge effect is substantially eliminated and the frictional force is extremely small. Thus, the second damping force is small. See particularly page 22, line 13 through page 23, line 10.

In accordance with Applicants' device described above, the ability of the autotensioner to change the damping force provides the ability to effectively dampen vibration without reducing tension in the belt. In this regard, "if the tension of the belt 10 falls, the force received from the belt 10 falls, so the frictional force becomes smaller, the ability of the pulley 22 to follow the belt 10 is raised, and a fall in tension of the belt 10 is

prevented. Conversely, if the tension of the belt 10 increases, the force received from the belt 10 also increases, the frictional force becomes greater, and the rocking of the rocking arm 24 is attenuated. Thus, the magnitude of the frictional force changes at the autotensioner 20". See page 18. lines 16-24. The YASUHITO et al. patent fails to show such a configuration and operation.

The YASUHITO et al. patent discloses an autotensioner including a base 20, a rocking arm 30, a pulley 10, a torsion spring 40, a belt, and a friction member 60. The YASUHITO et al. patent discloses an autotensioner in which the damping force is generated by the construction in which a boss 31 is urged by a plate spring 70 in the axial direction so that a friction member 60 is pressed to an inner surface 21 of a fixed base 20, by an outer surface 31a of the boss 31. Thus, the damping force is a friction force generated by the friction member 60. The value of the damping force depends only upon the spring force of the plate spring 70. In other words, the damping force is not changed in accordance with a rotational angle of the arm about the pivot, as in Applicants' claimed invention. Thus, YASUHITO et al. does not disclose an autotensioner that generates first and second damping forces that have different values. Therefore, the YASUHITO et al. patent does not show a device including "a friction member that is interposed between an outer circumferential surface of said tubular part and an inner circumferential surface of said base" and "said torsion coil spring being attached eccentrically to the axial center of said base, and said

rocking arm being supported to be able to be displaced relative to said base, whereby a first damping force acting on said rocking arm when said belt is tensioned becomes relatively larger than a second damping force acting on said rocking arm when said belt is slack", as set forth in amended claim 1. Since the reference fails to show each and every element of the claimed device, the rejection of claim 1 under 35 U.S.C. § 102(a) over YASUHITO et al. is improper and withdrawal thereof is respectfully requested.

Applicants submit that dependent claims 2-4, which are at least patentable due to their dependency from claim 1 for the reasons noted above, recite additional features of the invention and are also separately patentable over the prior art of record based on the additionally recited features.

Further, the Examiner has rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over YASUHITO et al. The Examiner takes the position that the YASUHITO et al. device shows the claimed invention except for the magnitude of the damping force. The Examiner contends that it would have been obvious to modify the YASUHITO et al. device to include the claimed damping force magnitude, since it has been held that discovering an optimum value of a variable involves only routine skill in the art. However, Applicants note that YASUHITO et al. fails to teach or suggest the subject matter claimed in claim 6. Claim 6 sets forth an autotensioner wherein, inter alia, "the magnitude of the first damping force is 1.5 to 3.5 times the magnitude of the second damping force". The

YASUHITO et al. patent fails to teach or suggest a device which provides a first and second damping force such that "the magnitude of the first damping force is 1.5 to 3.5 times the magnitude of the second damping force". The Examiner has concluded that modifying the YASUHITO et al. device to provide first and second damping forces such that "the magnitude of the first damping force is 1.5 to 3.5 times the magnitude of the second damping force" would have been obvious to one having ordinary skill in the art. However, Applicants submit that nothing in the applied prior art teaches or suggests the claimed combination, which provides at least the advantage of dampening vibration of the belt. Accordingly, Applicants submit that a factual basis for the rejection has not been established and thus a prima facie case of obviousness has not been established, and that rejection of claim 6 under 35 U.S.C. § 103(a) can only result from a review of Applicants' disclosure and the application of impermissible hindsight. Accordingly, the rejection of claim 6 under 35 U.S.C. § 103(a) over YASUHITO et al. is improper for all the above reasons and withdrawal thereof is respectfully requested.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections, and an early indication of the allowance of claims 1-4 and 6.

## SUMMARY AND CONCLUSION

In view of the foregoing, it is submitted that the present amendment is proper and that none of the references of record, considered alone or in any proper combination thereof,

anticipate or render obvious Applicants' invention as recited in claims 1-4 and 6. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Accordingly, consideration of the present amendment, reconsideration of the outstanding Official Action, and allowance of the present amendment and all of the claims therein are respectfully requested and now believed to be appropriate.

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so.

Applicants note that this amendment is being made to advance prosecution of the application to allowance, and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims.

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed number.

Respectfully submitted,
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